

## PROCESS FOR PRODUCING ALUMINUM OXIDE FILMS AT LOW TEMPERATURES

### Abstract of the Disclosure

5           A process for producing aluminum oxide thin films on a substrate by the ALD  
method comprises the steps of bonding a vaporizable aluminum compound to a growth  
substrate, and converting the bonded organoaluminum compound to aluminum oxide.  
The bonded aluminum compound is converted to aluminum oxide by contacting it with  
a reactive vapor source of oxygen other than water, and the substrate is kept at a  
10       temperature of less than 190°C during the growth process. By means of the invention it  
is possible to produce films of good quality at low temperatures. The dielectric thin  
films having a dense structure can be used for passivating surfaces that do not endure  
high temperatures. Such surfaces include, for example, polymer films such as organic  
electroluminescent displays. Further, when a water-free oxygen source is used, surfaces  
15       that are sensitive to water can be passivated.

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